

This is the electronic version of the Annual Fire Weather Report. It contains the essential information as required by National Weather Service Directive 10-404. (*scott weishaar*)

Table one shows the lightning frequency, by area, for the 2013 season.

**TABLE 1 - 2013 LIGHTNING DATA
(MAY THROUGH OCTOBER)**

AREA	# LIGHTNING DAYS 2013	AVE. # DAYS (LAST 18 YEARS)	PERCENT AVE.
ZONES 601/612	7	6.56	106.7%
ZONES 602/603	8	7.78	102.8%
ZONE 604	11	8.65**	127.2%
ZONES 605/607/660	14	12.28	114.0%
ZONES 606/608	18	14.06	128.0%

**** Average over 20-year period.**

DATA OBTAINED FROM BLM LIGHTNING DETECTION AND NORTHWEST COORDINATION CENTER

GOVERNMENT CAMP SNOW DEPTH: December storms resulted in a peak snow depth of 53 inches on the 27th. The snow cover fell to 21 inches on January 26th, but a couple of major snowstorms increased the snow depth to 64 inches on the 30th. A February lull dropped the snow pack to 37 inches on the 20th, but another round of storms boosted the snow cover to 72 inches by the 26th. This was the maximum snow depth for the 2012-2013 snow season. The snow depth declined to 31 inches at the end of March, and to 0 on April 22nd. Typically, snow cover persists through at least the end of May. The largest single-day jump was 25 inches on January 29th.

GOVERNMENT CAMP PRECIPITATION: For the months November 2013 through May 2013 Government Camp experienced below-normal precipitation four times, observed above-normal totals twice, and had one neutral month. The overall total was nearly six inches below normal, and was the lowest since 2009-2010.

RED FLAG WARNING STATISTICS FOR 2013

Table two shows the Red Flag verification statistics for the 2013 fire season.

TABLE 2 (ALL WARNINGS)

ZONE	# RFW	CORRECT RFW (A)	INCORRECT RFW (B)	MISSED EVENTS (C)	POD A/(A+C)	CSI A/(A+B+C)	FAR (1- [A/(A+B)])
601	0	0	0	0	0.00	0.00	0.00
612	0	0	0	0	0.00	0.00	0.00
602	0	0	0	0	0.00	0.00	0.00
603	0	0	0	0	0.00	0.00	0.00
604	0	0	0	0	0.00	0.00	0.00
605	2	1	1	0	1.00	0.50	0.50
606	2	2	0	0	1.00	1.00	0.00
607	2	2	0	0	1.00	1.00	0.00
608	3	2	1	0	1.00	0.67	0.33
660	2	1	1	0	1.00	0.50	0.50
TOTALS (ALL)	11	8	3	0	1.000	0.727	0.273
LIGHTNING	11	8	3	0	1.000	0.727	0.273
WIND/RH	0	0	0	0	0.000	0.000	0.000
HAINES 6	0	0	0	0	0.000	0.000	0.000

NUMBER OF WARNED EVENTS: 3

EVENTS PRECEDED BY A WATCH: 2 OR 67%

MISSED EVENTS: 0

INCORRECT EVENTS: 1

NOTE: Refer to the Annual Operating Plan for complete Red Flag criteria.

EVENT LEAD TIMES

Tables 3 and 4 show the respective warning and watch lead times for all events in 2013.

TABLE 3 – WARNING LEAD TIMES

EVENT	RANGE OF LEAD TIMES	AVE. ZONE LEAD TIME
<i>July 30-August 1 (Lightning)</i>	18 hrs 05 min ZONE 606 21 hrs 05 min ZONE 607 23 hrs 05 min ZONE 608	20 HRS 45 MINS
<i>August 7-9 (Lightning)</i>	26 hrs 08 min ZONE 608 26hrs 40 min ZONE 660 27 hrs 40 min ZONE 605 29 hrs 40 min ZONE 607 48 hrs 08 min ZONE 606	31 HRS 39 MINS
<i>August 21-22 (Lightning)</i>	Did Not Verify Zone 608. Fuel conditions immediately after the event did not justify a warning.	
OVERALL AVE. LEAD TIME		27 HRS 34 MINS

TABLE 4 – WATCH LEAD TIMES

EVENT	RANGE OF LEAD TIMES	AVE. ZONE LEAD TIME
<i>July 30-August 1 (Lightning)</i>	23 hrs 07 min ZONE 606 26 hrs 07 min ZONE 607 28 hrs 07 min ZONE 608	25 HRS 47 MIN
<i>August 7-9 (Lightning)</i>	31 hrs 07 min ZONE 608 51 hrs 08 min ZONE 660 52 hrs 08 min ZONE 605 53 hrs 07 min ZONE 606 54 hrs 08 min ZONE 607	48 HRS 28 MIN
<i>August 21-22 (Lightning)</i>	NO WATCH ISSUED DID NOT VERIFY	Not Applicable
OVERALL AVE. LEAD TIME		39 HRS 52 MINS

The Portland office switched to all-points NFDRS forecast in 2009, instead of zone trend forecasts. It was shown by neighboring forecast offices that individual point forecasts yielded higher verification scores versus zone trend forecasts. In the past, the Portland office provided individual NFDRS forecasts for eight sites: Village Creek, Pebble, Fields, South Fork, Wanderer's Peak, Horse Creek, Yellowstone, and Canyon Creek. Table five (below) shows the 2013 NFDRS verification statistics for the above listed sites. The values in red indicate improvement over the 2012 scores.

TABLE 5 – 2013 SITE-SPECIFIC NFDRS VERIFICATION

SITE	TEMPERATURE			HUMIDITY			WIND		
	FCST MAE	PERS. MAE	SCORE	FCST MAE	PERS. MAE	SCORE	FCST MAE	PERS. MAE	SCORE
<i>Village Creek</i>	4.03	6.04	33.28%	9.82	14.51	32.32%	1.41	1.26	-11.90%
<i>Pebble</i>	3.57	6.12	41.69%	9.40	15.58	39.67%	1.70	1.31	-29.77%
<i>Fields</i>	3.95	5.92	33.28%	10.45	15.47	32.45%	2.26	2.22	-1.80%
<i>South Fork</i>	3.39	5.60	39.46%	9.08	14.55	37.59%	1.46	1.42	-2.82%
<i>Wanderer's Peak</i>	3.46	6.03	42.62%	8.47	13.90	39.06%	1.71	1.77	3.39%
<i>Horse Creek</i>	3.15	5.81	45.78%	8.78	13.22	33.58%	1.37	1.23	-11.38%
<i>Yellowstone</i>	3.96	6.80	41.76%	9.28	15.42	39.82%	1.68	1.64	-2.44%
<i>Canyon Creek</i>	5.54	7.84	29.34%	9.27	15.52	40.27%	1.65	1.97	16.24%

Table six shows the 2013 NFDRS verification statistics, by area, and by zone. Improvement in temperature, RH and wind are shown in blue. Red values indicate lower scores.

TABLE 6 – 2013 NFDRS VERIFICATION

ZONE	TEMPERATURE	HUMIDITY	WIND
601	33.82%	32.48%	-2.55%
602	33.57%	31.96%	3.62%
603	27.68%	28.46%	0.54%
604	26.24%	17.61%	5.12%
605	40.00%	28.31%	3.74%
606	34.52%	32.09%	5.41%
607	34.81%	34.27%	-17.14%
608	38.62%	37.32%	-8.20%

612	30.64%	27.52%	5.68%
660	33.38%	34.89%	2.02%
ALL	32.92%	31.07%	1.00%
2012 ALL	36.2%	30.2%	-2.2%
2011 ALL	37.4%	32.2%	7.5%
2010 ALL	38.5%	28.1%	5.5%
2009 ALL	40.5%	33.7%	4.0%

FORECASTS AND SERVICES

SPOT FORECASTS

Spot forecast requests in 2013 were up slightly compared to last year. There were 153 spot requests through early December 2013. The number of wildfire spots dropped from 51 in 2012 to 25 this year, which was the lowest total since 2007. Oddly enough, there were six wildfire spot requests in October, and two more in November. Prescribed fire spot request distribution was fairly uniform throughout the season, heaviest in May and again in the late-summer and early fall periods. The spring burning period (May and June) had 34 spot requests, one more than last year. The dry late summer and early fall period provided opportunities for prescribed fire activities. Fuel indices were well below average from late-August through early October, unlike 2012. There were 33 spot requests this year from September 1st through October 31st, compared to 36 last year. November activity was primarily pile burning, with the exception of two wildfire spots in the North Cascade Unit of the Molalla ODF district, and two Search and Rescue (SAR) requests. The US Fish and Wildlife continued to be quite active in prescribed fall burning.

The use of spot forecasts continues to become more diverse. There were a handful of requests for search-and-rescue missions, training exercises by local fire departments, public safety, and HAZMAT. There were also a few spot forecast requests for ocean buoy deployment and maintenance missions. There were 4 spot requests for annual early-spring spray activities. Figure 1 (next page) shows the 2013 spot breakdown by month.

The Willamette National Forest has always been one of the primary users of the spot forecast program. The forest accounted for 38 of the 58 Forest Service spot forecast requests. The Mt. Hood National Forest remained a primary participant, with 13 spot requests. The Mt. Hood NF had just 2 wildfire spot requests. The US Forest Service accounted for about 35 percent all spot requests. Typically, the Forest Service provides for nearly 50 percent of all spot requests. The US Fish and Wildlife Service continued to utilize the spot program for its prescribed burn activities. The USFWS submitted 30 requests, or nine more than last year. Other agencies that were prominent in the spot forecast program included the Oregon Department of Forestry (ODF), local fire departments, and county sheriff departments. Surprisingly, the Washington Department of Natural Resources (DNR) did not have any requests. The Grand Ronde tribe of the BIA submitted one prescribed burn request.

The most active spot months were May, June, August, and September. These months accounted for nearly 65% of all spot requests. Normally, wildfire requests start to increase in July, and reach a peak in August. This year, the prime fire season started on time, but basically came to an end by the end of August. The prime fire season was several weeks shorter than normal. The 2013 fire season was most noted for the abundance of fire activity of state land. There were 16 wildfire spots on federal land, and 9 on state-protected areas.

Figure 1 - 2013 SPOT FORECASTS (BY MONTH)

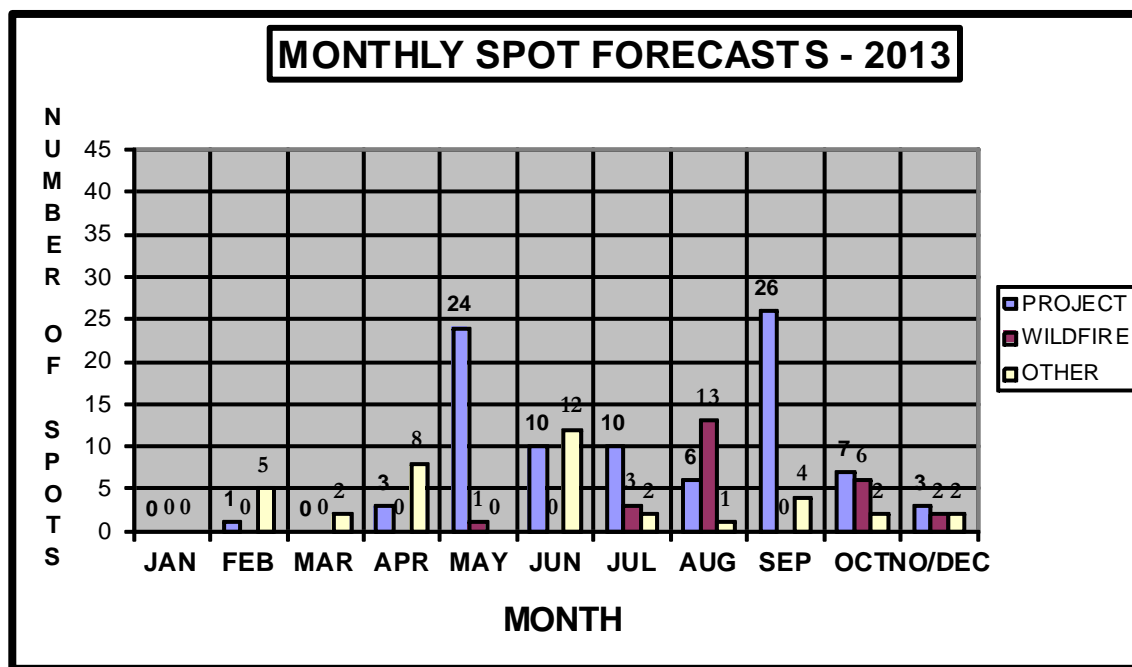


Table 7 (next page) shows the annual spot forecast data from 1995 to 2013. The spot frequency showed a dramatic increase from 2000 to 2003, but due to the change in forecast area responsibility and agency requirements for prescribed burns, 2004 spot totals were much lower. Also, some units/districts curtailed prescribed burn activities starting in 2004 due to budget constraints, staffing concerns, or a number of other reasons. The number of prescribed burn spot requests this year was a little lower than last year. However, there was a big increase in the number of non-fire spot requests. Search-and-Rescue, ocean buoy deployment missions, and training exercises accounted for nearly 20% of all spot requests.

Seasonal spot totals exhibited a consistent trend from 2008 to 2010, with an average of about 125 spots per season. The 2011 spot season was the busiest since the 2003 transfer of fire weather zones 609, 610, and 611 to the Pendleton office. The 2013 spot tally was a little unusual due to the low number of wildfire spots. It is interesting to note that of the 25 wildfire spot requests, 8 occurred from October to the end of November. Optimum prescribed burning conditions in May and September resulted in a total of 50 spot requests in those months, about 55% of the yearly prescribed burn total.

TABLE 7 – ANNUAL SPOT FORECAST DATA

YEAR	PROJECT*	WILDFIRE	TOTAL
1995	104	15	119
1996	64	51	115
1997	58	9	67
1998	52	31	83
1999	58	54	112
2000	89	20	109
2001	125	70	195
2002	123	147	270
2003	117	132	249
2004	71	21	92
2005	55	29	84
2006	120	96	216
2007	70	25	95
2008	61	73	134
2009	57	58	115
2010	69	51	120
2011	128	93	221
2012	106	51	157
2013	128	25	153

** = INCLUDES TRAINING SPOTS, SEARCH AND RESCUE, AND OTHER MISC. REQUESTS.*

TURN-AROUND TIME

ANNUAL SPOT FORECAST TURN-AROUND TIME

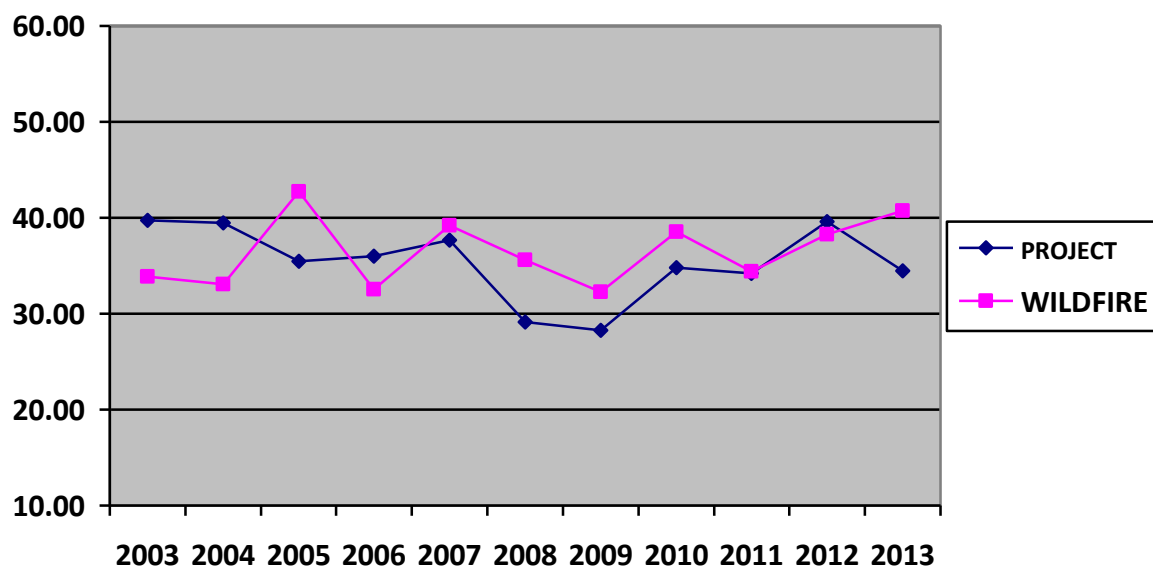
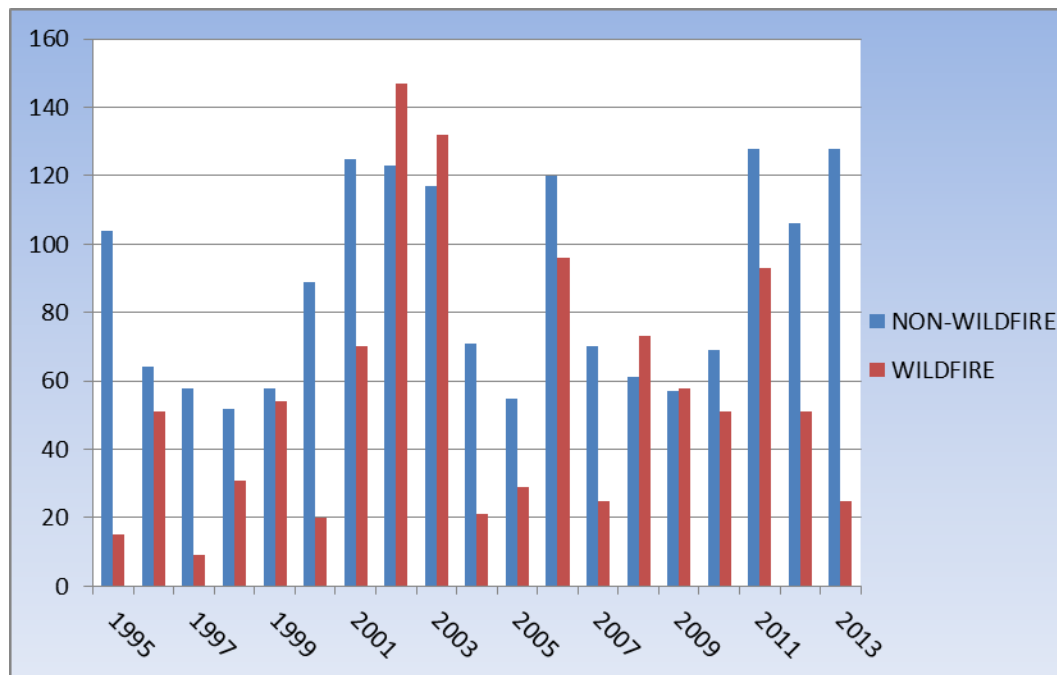


TABLE 8 – TURN-AROUND TIMES

YEAR	PROJECT	WILDFIRE
2013	34:30	40:43
2012	39:35	38:17
2011	34:13	34:24
2010	34:47	38:33
2009	28:17	32:16
2008	29:07	35:38
2007	37:41	39:14
2006	36:01	32:33
2005	35:30	42:42
2004	39:30	33:06
2003	39:42	33:54

- *PROJECT TIMES ONLY INCLUDE PRESCRIBED BURN SPOTS*

ANNUAL SPOT FORECAST TOTALS



LARGE FIRES AND IMET DISPATCHES

The 2013 fire season was short and relatively benign. Peak fuel conditions started in mid to late July and continued through mid-August. There was a higher frequency of lightning compared to previous years, but the abundant lightning did not contribute to an excessive number of large fires. There were no large fires in the fire area of responsibility, and no Type I or Type II Incident Management Team deployments. The Portland office provided several spot forecasts in early-August for a 20-acre wildfire in the Middle Fork District of the Willamette National Forest. Another lightning-caused fire, the 10-acre Landes Creek Fire, near Oakridge and Hills Creek Reservoir, resulted in three spot forecast requests. Table 9 shows the largest fires of the 2013 fire season. Note that there were NO fires that met large-fire criteria.

TABLE 9 – MAJOR FIRES

FIRE NAME	AGENCY	SIZE	START DATE	CONTAIN DATE	CAUSE
Opal Lake Fire	USFS Willamette	20	July 31, 2013	August 6, 2013	Lightning
Landes Creek Fire	USFS Willamette	10	July 26, 2013	July 31, 2013	Lightning

The Portland office filled **SEVEN** IMET requests.

1. MT. HOOD SEARCH AND RESCUE (3 DAYS)

IMET: JON BONK
DATES: June 27th through June 30th, 2013
LOCATION: Timberline Lodge, Mt. Hood NF
IMT: Clackamas County Sheriff
CAUSE: Search and Rescue

2. DOUGLAS COMPLEX (16 DAYS)

IMET: SCOTT WEISHAAR
DATES: July 28th through August 12th, 2013
LOCATION: Near Glendale, OR
Oregon Dept. of Forestry, Douglas Forest Protection Agency
IMT: ODF IMT and Oregon State Fire Marshal (OSFM)
IC- Dennis Sifford (ODF) and Dennis Ingrao (OSFM)
CAUSE: Lightning

3. LABRADOR FIRE (15 DAYS)

IMET: JON BONK
DATES: July 30th through August 13th, 2013
LOCATION: Near Lake Selmac, OR
Rogue-Siskiyou NF

IMT: ORCA ICT2
IC – Brett Fillis
CAUSE: Lightning

4. CONRAD LAKE FIRE (5 DAYS)

IMET: SHAWN WEAGLE
DATES: August 19th through August 23rd, 2013
LOCATION: Rimrock Lake, near Naches, WA
Okanagan-Wenatchee NF
IMT: WA IMT3
IC – Bob Allbee
CAUSE: Lightning

5. MANASTASH RIDGE FIRE (11 DAYS)

IMET: SHAWN WEAGLE
DATES: August 23rd through September 2nd, 2013
LOCATION: Near Thorpe, WA
Okanagan-Wenatchee NF
IMT: WA IMT4
IC – Larry Nickey
CAUSE: Lightning

6. GOVERNMENT FLAT COMPLEX (9 DAYS)

IMET: SCOTT WEISHAAR
DATES: August 21st through August 29th, 2013
LOCATION: Near The Dalles, OR
Oregon Dept. of Forestry – Central Oregon District
USFS – Mt. Hood NF – Barlow District
IMT: ODF IMT and OSFM IMT
IC – Chris Klein (ODF) and John Ingrao (OSFM)
CAUSE: Lightning

7. FORKS COMPLEX (11 DAYS)

IMET: SHAWN WEAGLE
DATES: September 10th through September 21st, 2013
LOCATION: Near Forks of Salmon, CA
USFS – Klamath NF – Ukonom District
IMT: Klamath Type III Team
IC – Toby Herold
CAUSE: Lightning

**TABLE 10 – TRAINING AND EDUCATIONAL OUTREACH
ACTIVITIES**

DATES	ACTIVITY	AGENCY/USER	INSTRUCTOR
January 28-29, 2013	S-290 ALOHA, OR	TVFR	WEISHAAR
February 16, 2013	S-190 PCC CASCADE	PORTLAND COMM. COLLEGE	WEAGLE
March 14-15, 2013	S-290 CLACKAMAS CC	CLACK. COMM. COLLEGE	BONK
March 11-15, 2013	VIRTUAL IMET WORKSHOP	NWS	WEISHAAR ATTENDEE
March 18-22, 2013	VIRTUAL IMET WORKSHOP	NWS	WEAGLE/BONK ATTENDEES
April 17, 2013	RT-130 HOOD RIVER	USFS	WEAGLE/WEISHAAR/BONK ATTENDEES
May 4, 2013	S-190 PCC CASCADE	PORTLAND COMM. COLLEGE	BONK
May 7, 2013	S-390 MCKENZIE	USFS	WEISHAAR
May 20, 2013	S-390 CLACKAMAS CC	CCC	WEISHAAR
May 20-23, 2013	S-390 CLACKAMAS CC	CCC	DONOFRIO ATTENDEE
June 14, 2013	FIRE WX REFRESHER COL. GORGE SCENIC AREA	USFS	WEISHAAR
June 17-18, 2013	S-290 GIFFORD PINCHOT	USFS	BONK
June 24-25, 2013	S-290 ST. HELENS, OR	ODF	WEISHAAR/DONOFRIO